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MACHINE-READABLE VERSION OF THE CATALOG OF
SUPPLEMENTAL STARS TO THE BONNER
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**Documentation for the
Machine-Readable Version
of the
Catalog of Supplemental Stars to the
Bonner Durchmusterung**

May 1980



NSSDC/WDC-A-R&S 80-01

DOCUMENTATION FOR THE MACHINE-READABLE VERSION OF THE
CATALOG OF SUPPLEMENTAL STARS TO THE BONNER DURCHMUSTERUNG

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May 1980

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SECTION 1 - INTRODUCTION

The *Bonner Durchmusterung* catalogs (Argelander 1859-62, Küstner 1903), δ zones $+89^\circ$ to -1° , contain supplemental stars having lower case letter designations following the BD numbers after which they have been inserted. Many problems of identification have arisen over the years because the supplemental stars have been included in certain machine-readable catalogs without their letter designations, thus making it impossible for a computer to distinguish between a BD star and its insert(s). The need for a machine-readable version of the supplemental stars list arose in connection with identifying stars in other catalogs in order to add the letter designations to them.

The initial catalog of supplemental stars was prepared from the second edition of the BD (Küstner 1903), but proofreading and checking were accomplished by using the reprinted edition (Bonn Universitäts Sternwarte 1968) which incorporated all errata known at that time. In that way, it was possible to simultaneously derive tables of supplemental stars added, deleted or modified for the reprinted edition.

This documentation is intended to fully describe the magnetic tape version of the catalog and to enable users to read and process the tape without problems, guesswork, or further literature consultation. It should be distributed along with any unmodified machine-readable version of the catalog.

SECTION 2 - TAPE CONTENTS

A byte-by-byte description of the contents of the catalog is given in Table 1. The suggested format is given in the final column and can be modified depending upon usage, but care must always be exercised when changing character formats to integer or real (see Section 4).

Table 1. Tape contents. Catalog of Supplementary BD Stars

Byte(s)	Description	Suggested Format
1- 9	BD number	
	1 sign	A1
	2- 3 zone	I2
	4 blank	1X
	5- 8 number	I4 (or I5)
	9 letter designation	A1
10-16	Right ascension (1855)	
	10-11 hours	I2
	12-13 minutes	I2
	14-16 seconds	F3.1
17-22	Declination (1855)	
	17 sign	A1
	18-19 degrees	I2 (or I3)
	20-22 minutes	I2
23	Blank	1X
24-27	Magnitude	A4

SECTION 3 - TAPE CHARACTERISTICS

The information contained in Table 2 is sufficient for a user to read the machine version of the catalog. Information for the entire catalog is given in the table, but data which are easily varied from installation to installation, such as blocksize (physical record length), blocking factor (number of logical records per physical record), total number of blocks, tape density, and coding (EBCDIC, ASCII, BCD, etc.) are not included: They should always be transmitted with tape copies of the catalog.

Table 2. Tape characteristics. Catalog of Supplementary BD Stars

NUMBER OF TRACKS	9
NUMBER OF FILES	1
LOGICAL RECORD LENGTH (BYTES)	27
RECORD FORMAT	FB
TOTAL NUMBER OF LOGICAL RECORDS	838

SECTION 4 - REMARKS AND REFERENCES

The original BD supplemental data were transferred to coded forms by K. Kress at the National Space Science Data Center (NSSDC) at Goddard Space Flight Center. They were also transferred to punched cards at NSSDC, and thence to a computer disk file accessible via an interactive system. The listed file was then proofread against the reprinted microversion (Bonn Universitäts Sternwarte 1968) and additions, deletions and modifications made to the file by W. H. Warren Jr.

The letter designations are coded as lower case characters, but on printers without the lower case chain, they will appear as standard upper case letters.

The order of stars in the catalog is from north to south and increasing α within each δ zone. The magnitude data must be read in character format because the words VAR and NOV occur within the field and byte 27 contains a ? in one case.

REFERENCES

Argelander, F. (1859-62). *Bonner Sternverzeichnis. Erste bis dritte Sektion*, Astronomischen Beobachtungen auf der Sternwarte der Königlich-Rhein. Friedrich-Wilhelms-Universitäts zu Bonn, Bands 3-5.

Bonn Universitäts Sternwarte (1968). *Bonner Durchmusterung, Nördlichen Teil, Deklinations-Zonen -1° bis $+89^\circ$ Sternverzeichnis*, Vierte Auflage herausgegeben von der Universitäts-Sternwarte Bonn.

Küstner, F. (1903). *Bonner Durchmusterung des Nördlichen Himmels*, zweite berichtigte Auflage, Bonn Universitäts Sternwarte.

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Table 3. Supplementary BD Stars Added in Reprinted Edition

-00 2281a	+26 1414a	+35 180a	+42 3093a	+45 3139a	+48 3799a
-00 3110a	+26 2056a	+36 4154a	+42 4100a	+45 3141a	+49 80a
-00 4212a	+26 2059a	+37 3418a	+42 4178a	+46 489a	+49 937a
+00 4718a	+28 258a	+39 4869a	+42 4611a	+46 499a	+49 1405a
+02 2309a	+28 1280a	+40 260a	+43 1164a	+46 2755a	+49 1571a
+03 1727a	+28 4536a	+40 2004a	+43 1784a	+46 2844a	+49 2117a
+04 2289a	+29 3503a	+40 2006a	+43 2563a	+46 2886a	+49 3452a
+04 3561a	+29 4240a	+40 3209a	+43 3248a	+46 2912a	+49 3546a
+05 462a	+29 4470a	+40 4729a	+43 3913a	+46 3116a	+49 4309a
+12 206a	+30 420a	+41 312a	+43 4086a	+46 3934a	+50 242a
+15 4266a	+30 4456a	+41 1607a	+43 4119a	+47 630a	+50 1907a
+16 4370a	+31 366a	+41 1608a	+43 4388a	+47 1278a	+56 606a
+17 2116a	+31 2042a	+41 2269a	+44 312a	+47 3074a	+56 2616a
+18 368a	+32 4341a	+41 2680a	+44 1308a	+47 3202a	+57 2864a
+18 3421a	+32 4668a	+41 2680b	+44 2480a	+48 1302a	+58 764a
+19 339a	+33 21a	+41 3640a	+44 2721a	+48 1391a	+58 1096a
+21 1842a	+33 1429a	+42 376a	+44 3419a	+48 1538a	+59 2826a
+21 2355a	+33 4238a	+42 401a	+45 513a	+48 1783a	+67 1046a
+21 3114a	+34 527a	+42 1084a	+45 1068a	+48 1986a	+76 857a
+23 1503a	+34 666a	+42 1798a	+45 1073a	+48 2827a	+78 314a
+26 71a	+34 4595a	+42 2954a	+45 1215a		

Table 4. Supplementary BD Stars Deleted from Original Edition in Reprinted Edition

+13 5168a +15 612a +46 1767a

Table 5. Modifications of Original Supplementary Numbers in Reprinted Edition

+40 4729a changed to +40 4729b, +40 4729a added
+48 1302a changed to +48 1302b, +48 1302a added

SECTION 5 - SAMPLE LISTING

The sample listing below contains logical data records exactly as they are recorded on the tape. The beginning of each record and bytes within the record are indicated by the column heading index across the top of the listing.

LISTING OF RECORDS FROM TAPE FILE

TAPE FILE NAME: BD SUPPLEMENTARY CATALOG

RECORDS 1 TC 30

TAPR FILE 22

RECORD LENGTH 27 BYTES

INPUT VOLSER F30443

[illegible]

RECORD	1	+62	634a21	6390+82293	VAR
RECORD	2	+64	131a	258520+87145	9.5
RECORD	3	+79	14a	328180+79335	VAR
RECORD	4	+79	259a	7 8340+79579	9.5
RECORD	5	+79	467a	1535190+79 72	VAR
RECORD	6	+75	463a	1613200+79369	9.2
RECORD	7	+75	590a	1836 70+79311	7.5
RECORD	8	+75	744a	2233220+79819	9.5
RECORD	9	+79	755a	2345330+79528	9.5
RECORD	10	+76	9a	314580+78204	9.3
RECORD	11	+76	13a	019140+78302	9.5
RECORD	12	+74	227a	618160+78 5	9.5
RECORD	13	+78	314a	525470+78301	VAR
RECORD	14	+77	700a	1339 0+77 6	9.5
RECORD	15	+76	279a	713380+75403	5.5
RECORD	16	+76	857a	2221430+76583	9.5
RECORD	17	+75	460a	1145500+75185	9.5
RECORD	18	+75	646a	1749110+75 66	9.5
RECORD	19	+74	230a	445300+74483	5.5
RECORD	20	+74	266a	543290+74290	VAR
RECORD	21	+74	456a	11 5370+74156	8.3
RECORD	22	+72	732a	1631570+72344	VAR
RECORD	23	+71	482a	841380+71211	8.9
RECORD	24	+71	1091a	2146590+71 46	9.5
RECORD	25	+70	235a	3 6320+70 93	9.5
RECORD	26	+70	588a	943380+7212	REB
RECORD	27	+65	993a	1835 90+69553	9.5
RECORD	28	+68	1104a	20 4580+68883	5.5
RECORD	29	+68	1326a	2241420+68399	9.3
RECORD	30	+67	133a	1 6250+67259	9.5

A listing of the entire catalog is given on the following pages for reference purposes. The order is from north to south as on the tape. Similar listings with coordinates precessed to any equinox can be produced by request to the Astronomical Data Center.

W. H. WAREEN JR. AND K. KRESS

ORIGINAL PAGE IS
OF POOR QUALITY

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